A STUDY ON THE EFFECTIVENESS OF USING WEB BASED ENGLISH LEARNING MEDIA FOR NEW-COMING STUDENTS OF POLBENG

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Abstract: *The aim of this study was to know the effectiveness of the use of web-based English learning media for new-coming students of State Polytechnic of Bengkalis as interactive media to learn English which was not restricted in the classroom only. This study belongs to the quasi experimental research and presents pre-test, post test and to investigate the effect of using web-based English media in mastering basic English. The participants were new coming students from the first semester (N=54) of State Polytechnic Bengkalis and divided into two groups. Both groups were taught English at basic level, however, the experimental group students who are exposed to web based English media and the controlled group students who received conventional method. Pre-test and post-test were given to both experimental group students and controlled group students. The score of the tests were compared through independent sample t-test. The mean value of pre-test of experimental class was 61.35, while the control class was 52.23. After learning using the website in experimental class the mean value obtained in post-test was 78.85, while in control class was 59.04. The improved of learning outcomes can be seen from the level of significance was 0.000 and it was lower than t test 0.000<0.05. It means that the hypothesis null is not accepted. Therefore, it can be concluded that the score of the students in learning basic English learning material between the experimental group and control group was significantly different. The experimental group students who learned basic English learning material using web-based English learning media had increased their basic English knowledge.*

Keywords: *web-based learning media, basic English, new coming students of Polbeng*

INTRODUCTION

The use of the advanced technology has influenced many aspects in daily life. One of them is the use of the internet. People nowadays use internet to help them in conducting activities and work such as advertising their

business, hunting the job, communicating or chatting with the other people in the world. In fact, the use of internet offers many advantages in education. Both teacher and students could access incredible source of information such as from a website. Numerous websites provide online English learning material. Using the web in teaching learning process, that is usually called as web-based learning, can be a tool for transferring the knowledge to the students, accessing information and as a medium of communication. The students and the instructors can communicate via the web-board and the chat-room, so that the teaching and learning processes is not limited in the classroom only. The students can access knowledge and learn English anytime, anywhere, to promote their English proficiency and changes in the society future.

However, there are significant online materials that might not suit the students' needs. Since, one of the concerns of teaching English as foreign language is preparing the students to be able to communicate communicatively using the target language, the teachers have to be clever and innovative in providing the materials. State Polytechnic of Bengkalis has provided the students with the use of the internet in the college environment. The students might access resource of the learning material.

Therefore, to assist the students in mastering English the lecturers has designed the website which contains suitable English materials and the students' needs. This website has designed for new coming students of State Polytechnic Bengkalis as supplementary materials in order to prepare and equip them with basic English knowledge in the first semester. The purpose of this study is to know the effectiveness of using web-based English learning media on English mastery for new coming students of State Polytechnic Bengkalis.

REVIEW OF RELATED LITERATURE

2.1.Web-Based Learning

2.2.1 The Nature of Web-Based in Language Learning

Web-based learning is associated with learning materials delivered in a web browser. Web-based learning entails content in a web browser and actual learning materials delivered in web format. Web browsers support hypertext, a form of cross-referencing in which a highlighted text selection is linked to other documents (Li and Hart in Richards and Willy, 2002:375). In addition, Roblyer and Doering (2010: 300) state that web-based language learning as one of the common ways to make efficient use websites in foreign language classes. It is a strategy in which a teacher identifies the websites and resources for students to use to aid their learning process.

Websites can be useful resources in fostering English language learning. In particular, their capacity to offer authentic language

tasks (e.g., reading authentic materials, participating in online chat, listening to native speaker recordings, and communicating with native speakers) and to boost students' motivation holds promise for facilitating the acquisition of English. Some studies have shown positive effects of using web-based activities on the students' conversational, reading, and writing skills (Gu, 2002; Kung & Chuo, 2002; Lin, 2003). Ngai et al. (2007) also argue that web-based teaching materials serve as a platform to facilitate teaching and learning and provide new approaches for conducting classes and delivering course materials. Moreover, application of web-based activities and integration of technology in language instruction were found to have a positive effect on learners' attitudes and their motivation for learning a second or
foreign language (Chen, 2004; Garcia and Arias, 2000).

2.2.2 Web-based instructional models

According to Khan (1997: 375-380) there are several web-based instructions as follows:

a. conversing, discussing
   Students are relating and comparing perspectives with other students and classrooms. Students could be tasked with reading a common book and discussing perspectives. It would be helpful to have access to e-mail, discussion boards, or chat software.
b. mentoring, questioning, supporting a partner
   Teachers might review student's work and provide critique or scaffold process and can be asked or interviewed online. Students might partner with and help one another. It would help to have e-mail, live, synchronous cameras for mentor to discuss, chat rooms with white boards, or digital drop boxes for file sharing and written critiques.
c. debating
   Students defend a position on some issues, typically involves preliminary research online and in libraries, collecting evidence to support one or more perspectives. Debate can be held in class or online with tools such as e-mail and discussion boards.
d. sharing data, analyzing
   Students are collecting information locally and sharing it with others remotely. Then, making use of data collected globally to analyze trends and issues. It helps to have e-mail, spreadsheets, and data analysis software.
e. accessing tutorials with exercises, quizzes, questions, online drill-and-practice
f. Students review content materials online, and then access interactive exercises to practice or apply the materials presented. It helps to have software for creating virtual exercises, knowledge of multimedia development programs (e.g. Director, Flash)

and/or mechanisms for placing them on the Web (e.g. Shockwave, Java).

2.2.3 Learners characteristics and needs

In web-based learning environment, the learner is responsible for actively seeking solutions to problems confined within the knowledge area being studied with guidance from the teacher. They are expected to view problems and questions presented by the teacher and those of other students. Students in the web-based learning environment are also expected to learn collaboratively and cooperatively (Khan, 1997 in Brooks W. D et al., 2002:68). Students are expected to work together in order to generate deeper levels of understanding of the course material. Students are also expected to share the resources and other materials they find with other learners. In the role of process management, students are expected to participate with minimal guidelines and interact with one another. Students must be willing to speak out when they have an opinion on something (Palloff and Pratt, 1998 in Brooks W. David et al., 2002:70).

METHODOLOGY

2.2.Research Design

This research classified into the quasi-experimental research. There were two groups; experimental group students and controlled group students. Both groups were given pre-test and post-test.

2.3.Sample

The participants of this study were the students of Instructional technology of State Polytechnic Bengkalis. at the third semester (N=54) and divided into two groups

2.4.The Instruments

Two instruments are used in this research consisting of the pre-test and post-test examination and self-reflection form. The test are created based on English learning material which was designed in the syllabus for the first semester students of Instructional technology of State Polytechnic Bengkalis. Nunan and Bailey (2009: 99) describes the pre-test post-test control group design as one of the ‘true experimental designs’ because of the fact that participants in controlled group could not receive the treatment.

1. Identical pretests were used in the groups to determine the participants’ previous knowledge on the targeted basic English items with the provision of the same amount of time.
2. Identical post-tests were carried out afterwards to examine students’ knowledge on the targeted basic English items after the consolidation through playing web-based English media(in experimental group).

2.5.Procedures

1. Class orientation was conducted on the first day of the experiment.

2. Pre-test was used before the experiment begun, the test was given both for experimental group and control group.
3. The experiment only given for experimental group while control group was taught using conventional method. The experimental group was taught by using web-based English learning media which is *English1polbeng.ga.* the students might access it by signing their students number and their major.
4. The post-test was conducted after the treatment finished.
5. The data of pre-test and post-test was statistically analyzed after the treatment finished and it had collected.

2.6.Data Collection Technique

The data were collected from the result of pre-test and post-test which were given to both experimental group students and controlled students.

2.7.Data analysis

The collected data was analyzed by using SPSS 20 program for:

1. Analyzing mean of scores of pre-test and post-test.
2. Analyzing Standard Deriviation (S.D.) of scores of pre-test and post-test.
3. Inferential analysis (T-test) which consists of normal testing, homogeneity testing, and hypothesis testing were used for comparing basic English learning material skills from pre-test and post-test examinations' results.

FINDING AND DISCUSSION

After conducted the pre-test, treatment, and post-test, the data collection then was analyzed in order to know the significant success of the applying of the technique that used. The data was analyzed using the SPSS version 22 for windows with descriptive analysis; and inferential analysis which consists of normal testing, homogeneity testing, and hypothesis testing. Parametric statistic if the data obtained are normal and non-parametric if the data are not normal. The following is brief description of the result of data analysis.

1. Experimental group

a. Pre-test of experimental group

Having observed the class, the researcher gave pre-test to experimental group. The pre-test was administered before teaching activity. The table which shows pre-test score of the students is as follows:

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pre_Exp	27	50	88	61.35	10.526
Valid N (listwise)	27				

From the table 1, it can be seen that the score of pre-test of experimental group. The total numbers of the students who belong to the experimental group is 27, the mean value of the pretest of the experiment class was 61.35. The minimum score

was 50 and the maximum score was 88

b. Post-test of experimental group

The post test was given after the treatment had been finished. Based on the data analysis of the post-test with computer assistant SPSS 22 in the experimental group, the mean and the standard deviation score can be seen at the table 2. as follows.

Table 2. Post-Test Result of experimental

	N	Minimum	Maximum	Mean	Std. Deviation
Post_Exp	27	60	98	78.85	9.477
Valid N (listwise)	27				

From the table above, it can be seen that the mean value of post-test result was 78.85, and standard deviation was 9.47. We can conclude that the students score have increased and significant different from the pre-test result before they attended the treatment. It was proved by the increasing minimum score which was 60 and the maximum score was 98.

c. Control group

a. Pre-test of control group

The pre-test was also conducted for control group students. Based on the data analysis of the pre-test with the computer assistance SPSS 22 in the control group, the mean and the standard deviation can be seen in table 3.

Table 3. The Pre-Test Result of Control Group

	N	Minimum	Maximum	Mean	Std. Deviation
Pre_Cntrol	27	36	65	52.23	7.675
Valid N (listwise)	27				

In this research the total number of the students who belong to the control group were 27, the mean value score was 52.23 and the standard deviation is 7.67.

b. Post-test in control group

Control group students was also given the post-test even though they didn't give the treatment. The summary of the data distribution of the post-test of the control group can be seen shown in the table 4.

Table 4. Post-Test Result of Control Group

	N	Minimum	Maximum	Mean	Std. Deviation
Post_Cntrol	27	40	75	59.04	9.602
Valid N (listwise)	27				

From the table, it can be seen that the mean score of post-test in control group is 59.04 and the standard deviation is 9.60.

2. Inferential Analysis

T-test was used to find out the effectiveness of the use of web-based English media in teaching basic English learning material, while to test the normality of the data the researcher employs the theory of Kolmogrov-Smirnov, to know the homogeneity of the data, the data must be tested by using homogeneity test. The analysis described below:

1. **Pre-test**

   a. **Normality Test**

A normality test is used to analyze whether the data distribution is normal or not. The researcher decides 0.05 for the significant value in this test. The normality test for the pre-test in the experimental group and control group, the data can be seen in the table below:

Table 5. The normality test result of the pre-test experimental group

One-Sample Kolmogorov-Smirnov Test		Pre_Exp
N		27
Normal Parameters[a,b]	Mean	61.35
	Std. Deviation	10.526
Most Extreme Differences	Absolute	.168
	Positive	.168
	Negative	-.141
Test Statistic		.168
Asymp. Sig. (2-tailed)		.058[c]
a. Test distribution is Normal.		

Regarding to the table above, it can be described that the data of the pre-test in the experimental group is normal. It is because the value of significance is higher than 0.05. It can be seen from Kolmogorov-Smirnov table in which the significance value of pre-test in the experimental group is 0.58>0.05. Therefore, the experimental group data in the pre-test is normal.

Table 6. The normality test result of the pre-test control group

One-Sample Kolmogorov-Smirnov Test		Pre_Cntrol
N		27
Normal Parameters[a,b]	Mean	52.23
	Std. Deviation	7.675
Most Extreme Differences	Absolute	.141
	Positive	.135
	Negative	-.141
Test Statistic		.141
Asymp. Sig. (2-tailed)		.198[c]
a. Test distribution is Normal.		

According to the table above, it can be described that the data of the pre-test in control group is normal. It is because the value of significance is higher than 0.05. It can be seen from Kolmogorov-Smirnov table in which the significance value of pre-test in the control group is 0.198>0.05. Therefore, the control group data in the pre-test is normal.

   b. **Homogeneity Test**

The homogeneity test is a test to measure whether the samples are homogeny or not. The result of homogeneity test is presented below:

Table 7. The homogeneity test result of the Students' pre-test

Levene Statistic	df1	df2	Sig.
1.569	4	14	.237

Based on the computation above, the significance of the students' basic English learning material mastery in the pre-test indicates the coefficient of 0.237. The probability (significance) is higher than 0.05. The result can be concluded that the data are homogeneous because the

value of significance is 0.237>0.05. Therefore, the variance of the two classes in the pre-test are homogeneous and the sample has the same variance. So the data meet the requirement of research analysis.

c. Hypothesis Test

T-test was used to compare the result of pre-test between experimental and control group. The t-test is applied to test whether there are significance different results of the two groups. The result of the t-test can be described in the following table:

Table 8. The result of t-test

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre_Exp-Pre_Cntrol	9.115	12.738	2.498	3.970	14.261	3.649	25	.823

Resource	Statistic	Df	Sig	Result
Experimental and control group	3.649	25	0.823	Not significant different

The table 8 shows that the value of p or the level of significance is 0.823. The value of p is higher than tt 0.05 or 0.823>0.05 means that hypothesis null is accepted.

2. Post-test

a. Normality test

A normality test was also used to analyze whether the data distribution in post-test data is a normal or not. The significant value 0.05 was decided in this test. The normality test was conducted by using Kolmogrov-Smirnov test. The result of the normality test for the post-test in the experimental group and control group, the data can be seen in the table below.

Table 9. The Normality Test Result of The Post-Test Experimental Group

One-Sample Kolmogorov-Smirnov Test		Post_Exp
N		27
Normal Parameters[a,b]	Mean	78.85
	Std. Deviation	9.477
Most Extreme Differences	Absolute	.141
	Positive	.119
	Negative	-.141
Test Statistic		.141
Asymp. Sig. (2-tailed)		.200[c]

a. Test distribution is Normal.

From the table above, it can be described that the data of the post-test in the experimental group is normal. It is because the value of significance is higher than 0.05. It can be seen from Kolmogrov-Smirnov table in which the significance value of post-test in the experimental group is 0.200>0.05. Therefore, the experimental group data in the post-test are normal.

Table 10. The normality test result of the Post-test control group

One-Sample Kolmogorov-Smirnov Test		Post_Control
N		27
Normal Parameters[a,b]	Mean	59.04
	Std. Deviation	9.602
Most Extreme Differences	Absolute	.114
	Positive	.114
	Negative	-.081
Test Statistic		.114
Asymp. Sig. (2-tailed)		.200[c,d]

a. Test distribution is Normal.

From the table above, it can be described that the data of the post-test in control group is normal.

It is because the value of significance is higher than 0.05. it can be seen from Kolmogrov-Smirnov table in which the significance value of post-test in the control group is 0.200>0.05. Therefore, the control group data in the post-test is normal.

b. Homogeneity Test

The homogeneity test is used to find out whether the sample has the same variance or not, to test the homogeneity of then variance, researcher used the levene test analysis. The result of homogeneity test is presented below:

Table 11. The homogeneity test result of the students' post-test

Levene Statistic	df1	df2	Sig.
1.028	6	14	.447

From the table above, the significance of the students' speaking skill in the post-test indicates the coefficient of 0.447. The probability (significance) is higher than 0.05. The result can be concluded that the data are homogeneous because the value of significance is 0.447>0.05.

c. Hypothesis Test

T-test was used to compare the result of pre-test between experimental and control group. The t-test was applied to test whether there are significance different results of the two groups. The result of the t-test can be described in the following table:

Table 12. The result of t-test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Post_Exp - Post_Cntrol	19.808	14.607	2.865	13.908	25.708	6.915	25	.000

Resource	Statistic	Df	Sig	Result
Experimental and control group	6.915	25	0.000	significant different

The table above shows that the level of significance is 0.000. Lower than t test 0.000<0.05 it means that the hypothesis null is not accepted. Therefore, it can be concluded that the score of the students in learning basic English using web-based learning media between the experimental group and control group is significantly different. Regarding to the result of the result of the data, it was found that the students have some improvement in basic English learning material knowledge. The students also really enjoyed in attending the processes of teaching and learning English not only in the classroom but also outside the class by using the website. It could be proved by their enthusiasm in participating the activities given in the website in which they could access it anytime and anywhere. The students might compare their answer in accomplishing the task with their friends and practice their English writing by chatting with each other. The lecturer also give the feedback to the students' after

they finish in accomplishing the task given.

CONCLUSION

According to the study, the result revealed that the mean value of pre-test of experimental class was 61.35, while the control class was 52.23. After learning English using the website, the experimental class obtained the mean value in post-test was 78.85, while in control class was 59.04.

The improved of learning outcomes can be seen from the level of significance was 0.000 and it was lower than t test 0.000<0.05. It was concluded that teaching basic English learning material using web-based English media significantly boosted the students' basic English knowledge and the website was effective to be used in teaching and learning basic English not only in the classroom.

These finding showed that the students were more motivated in studying English which can be proved by their enthusiasm in learning English especially basic English learning material using the website in which they could access it anytime and anywhere.

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